

is required for the filler, and the five openings successively cover the buckets of the conveyor and fill them without spilling.

The coal crusher, indicated at c in fig. 3, is shown in larger detail in fig. 6. This apparatus is necessary for crushing any large pieces of coal received, so that the whole of the coal may be suitable for use in mechanical stokers. The crusher is generally driven by a separate electric motor, and a safety shearing coupling should be provided to guard against damage to the rolls and gearing in the event of any iron or other hard substance being accidentally delivered with the coal.

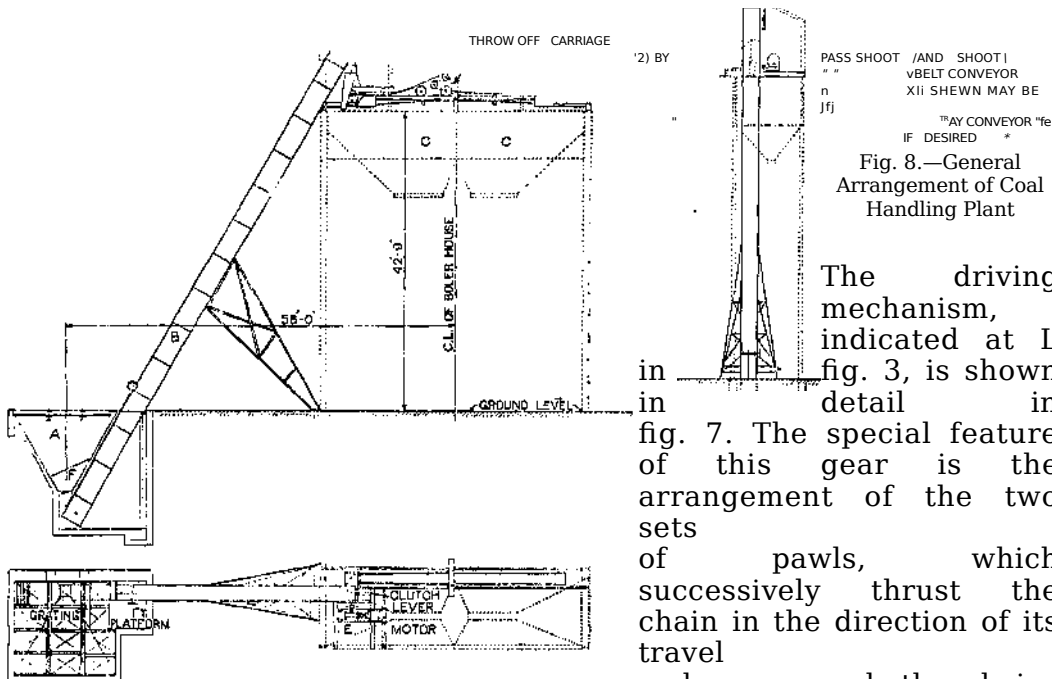


Fig. 8.—General Arrangement of Coal Handling Plant

The driving mechanism, indicated at L in fig. 3, is shown in detail in fig. 7. The special feature of this gear is the arrangement of the two sets of pawls, which successively thrust the chain in the direction of its travel and engage both chains

simultaneously.

By this device the wear on the chains is compensated, and a uniform drive is obtained. It will be appreciated that some such driving device is desirable, as a plain five- or six-sided driving sprocket gives a very irregular motion to the chain, thus causing large stresses to be set up with consequent rapid deterioration of the chain and other gear.

Bucket Chain Elevator with Belt or Tray Conveyor.—A typical general arrangement of a coal handling system, in which the above combination is used, is shown in fig. 8, in which A is the coal-receiving hopper, B a bucket chain elevator for lifting the coal above the level of the coal